

CONNECT

NEWCASTLE INNOVATION NEWS

NEWCASTLE
INNOVATION™

March 2009

CEO Welcome

Welcome to 2009. This year Newcastle Innovation celebrates 40 years in business. This is a special milestone for any business, especially for one at the cutting edge of research and development. This longevity is a testament to the quality and quantity of new technologies and capabilities developed at the University of Newcastle over the years and the service oriented business model developed at Newcastle Innovation.

It is the combination of these two important ingredients that allow our business partners to efficiently access and apply the research and technology capabilities of the University to innovate and create ongoing economic value.

To celebrate this milestone, we are planning a series of events and activities that are focused on invigorating our efforts to engage industry with the research capabilities available at the University. Visit our website – www.newcastleinnovation.com.au for more information as the year unfolds.

We look back on 2008 as being an outstanding year for Newcastle Innovation in terms of its engagement with industry in the areas of contract research, consulting and IP commercialisation. Our involvement in the inaugural Hunter Means Innovation 2008 festival and the creation of our “Exchange Event” program, are examples of our active marketing efforts which will continue in 2009.

However, entering 2009 also brings the scale of the Global Financial Crisis (GFC) into sharp relief. As a business dependent on expenditure on risky or expansionary technology development and innovation, we see the GFC providing some significant challenges. Despite this, I have confidence in the world class research capabilities in the University and our ability to connect industry with these capabilities and create value from these partnerships.

A new opportunity for Newcastle Innovation and the University will come through the establishment of the new Clean Energy Innovation Centre (CEIC) to be hosted by NI and located at the Industry Development Centre.

I hope you enjoy this issue of our Connect newsletter and invite you to contact one of our business development team to discuss your IP or commercial opportunities.

Dr Brent Jenkins
CEO Newcastle Innovation

Research News

A solution for soil decontamination

Soil remediation company, Innova Soil Technology led by Associate Professor John Lucas, School of Chemical Engineering, was appointed by Harvey Norman to treat contaminated soil

at the company's Springvale site in Victoria. The company used their unique thermal desorption process to treat the soil, making it safe for re-use on the site.

During the treatment the soil was independently sampled before and after processing to verify that all processed soil met the remediation

requirements. Clean soil is deemed fit for re-use on-site where required. To date, 241 independent product soil samples have come back with PCB levels below the limit of detection.

Apart from being only the second such cleanup of its kind in the world, the levels of cleanliness achieved in the treated soil and the control of emissions are the best for any such remediation, worldwide. For more information on Innova Soil visit www.innovasoil.com.au.



Improving the fertility of older women

A new research project at the University of Newcastle is looking at ways to improve the fertility of older women. Associate Professor Eileen McLaughlin from the the Faculty of Science and Information Technology has received \$400,000 from the National Health and Medical Research Council. She will investigate the healthy development of the female egg cell, called an oocyte, involved in reproduction. The research will build on the PRC for Reproductive Science's current investigations into the impact of environmental chemicals on female fertility.

Newcastle Innovation Limited

P: 02 4921 8777

F: 02 4921 8778

W: www.newcastleinnovation.com.au

E: innovation@newcastle.edu.au



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

Newcastle Innovation News

Newcastle Innovation turns 40!

Newcastle Innovation will be celebrating its 40th Anniversary in 2009. To mark the occasion, we will be holding a series of events throughout the year. Check our website for dates and more information.

Exchange Events

In 2008, Newcastle Innovation launched its Exchange seminars, a series of events that 'exchange' information and knowledge with industry in an effort to increase contract research, consulting and facilitate collaboration and investment. Successful Exchanges were held in Energy, Mining and Minerals Processing and Food Science Technology. Further Exchange events will be held in 2009.

Envirohunter 09

Newcastle Innovation will be showcasing the University's research in energy and the environment at Envirohunter 09 in May, Envirohunter is a conference which covers a range of environmental issues facing business people.

Hunter Innovation Festival

Newcastle Innovation will again be participating in the Hunter Innovation Festival in 2009. For dates and information visit www.newcastleinnovation.com.au

Inventors Day

Newcastle Innovation will be holding its Inventors Day early in 2009. Inventors Day is an initiative of Newcastle Innovation to provide both researchers and research students with an understanding of the patenting process and IP commercialisation. It is an opportunity to have any questions answered on research/ideas, next steps and patenting in general. Visit our website to check for dates.

NI to host Clean Energy Innovation Centre

It has been announced by the government that NI has been successful in its bid to host the Enterprise Connect Clean Energy Innovation Centre (CEIC). The CEIC will offer a range of business improvement services to help clean energy companies find and adapt the latest research and technology to improve products and manufacturing processes. It will provide access to specialist facilities and advice at the University to turn innovative ideas into new products. It will also help firms become export-ready and provide grants to address areas of weakness. The CEIC is a partnership between Newcastle Innovation, Enterprise Connect, the Australian Institute for Commercialisation and the Western Australia Sustainable Energy Association. The centre will be located in the Industry Development Centre. Visit www.enterpriseconnect.gov.au.

A novel drying and briquetting process for Banpu

Banpu Public Company Ltd a Thai based energy and mining company with interests in Indonesia and China, required a solution to quality and transportation issues associated with an Indonesian low quality coal. In order to reduce handling costs and improve the properties of the low quality coal, Banpu needed a cost effective drying and briquetting solution. Thus, the research brief defined was to develop a unique binderless briquetting system which would transform low quality coal into a higher quality product (low moisture, high grade solid fuel product). This would make the coal more attractive for thermal purposes, and allow the coal to be transported for blending and use for steel making processes. Newcastle Innovation delivered this unique research project using a combination of expert resources at The University of Newcastle and The University of Science and Technology and Shenyang Institute of Aeronautical Engineering in China.

A novel drying and briquetting process was developed by researchers Emeritus Professor Terry Wall and Professor Jianglong Yu in which the low quality coal was briquetted by a newly developed machine (without the need of a binder) into a high grade coal to form a low moisture briquette or pellet.

The result confirmed that a cost effective, higher quality, briquetted coal product could be manufactured from a low quality mined coal.

Research findings lead to improved sustainable procedures for management of estuary systems

Professor Philp Geary from the School of Environmental and Life Sciences has been assisting Port Stephens Council to improve procedures for maintaining estuary water quality. This follows the discovery of faecal contaminants in the Tilligerry estuary which led to harvest bans for Oyster farmers in the area. The research team from the University worked with the council to develop a sand mound filtration technology in the catchment to reduce the concentration of contaminants entering Tilligerry Creek.

Investigating new treatments for melanoma

Hunter researchers are examining the resistance of melanoma to chemotherapy in an effort to find new treatments for the disease. Dr Xu Dong Zhang from Calvary Mater Newcastle, Dr Rick Thorne from the University of Newcastle and Professor Peter Hersey from Calvary Mater Newcastle and the University of Newcastle, are leading the project. The Newcastle researchers will focus on a particular part of the cell, called the endoplasmic reticulum (ER), which sends out signal pathways that control cell survival. When activated for a prolonged period of time, the pathway will kill cells under extreme stress. However, it has previously been established that melanoma cells have developed resistance to the pathways and survive in the body. The new research will investigate whether the melanoma cells' adaptation to ER stress plays a role in the cancer's resistance to chemotherapy.

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